Nanophotonic Modeling
Lecture 2.10: $S^4$ GUI Input

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Photonic Simulations with S^4

Full-wave photonic simulations of arbitrary layered media, including thin-film and crystalline PV cells


https://nanohub.org/tools/s4sim/
S4Sim: Input

Can choose several examples drawn from the literature
S4sim: Materials Selection

Load Examples

Select categories and materials from photonicsDB or select user-defined materials.
S4sim: Layer Configuration

- Be careful of the relationship between the basis vector, thickness of the layers and the size of the patterns inside each layer.
- Be careful of the correlation between the basis vector, wavelength range, and reduced units.

- Coordinate of the first lattice base vector: x1 = 270 nm, y1 = 0 nm
- Coordinate of the second lattice base vector: x2 = 0 nm, y2 = 270 nm

Select Number of Layers: 6

Repeated layers:
- Do you need to repeat a range of layers? Yes
- Repeated layers from: 1 to: 10
- Times the layers are copied: 1

< Simulation Option Simulate >
S4sim: Layer Configuration

Parameters setting for each layer

Select desired output for each layer
S4sim: Simulation Parameters